PATENT APPLICATION
Po7880
LeA 36,216

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN APPLICATION OF	
KAMELIA KARLOU-EYRISCH ET AL	EXAMINING GROUP NO: 1711
SERIAL NO.: 10/705,503	
FILED: NOVEMBER 10, 2003	EXAMINER: RACHEL P. GORR
TITLE: REACTIVE SYSTEMS THAT HARDEN AT ROOM TEMPERATURE	

DECLARATION UNDER 37 C.F.R. §1.132

I, Jörg Tillack, residing in Bergisch Gladbach, Germany, hereby declare as follows:

1. I am a named inventor of the invention described in the captioned application.

2. I am familiar with the subject matter of the above-identified application and with the subject matter in U. S. 6,060,574("Schmalsteig") and the Acclaim product brochure.

3. Under my direction and control, the following experiments were carried out to demonstrate the surprising result provided by the use of polyether polyols produced by double metal cyanide ("DMC") catalysis in the production of blocked polyurethane prepolymers:

Experiment 1 - Use of a polyether produced by DMC catalysis

51.9 g of 2,4-toluene diisocyanate and 10 mg of 2-chlorpropionic acid were mixed and heated to 80 °C. Within 3 hours, 298.3 g of a polypropylene glycol produced by DMC catalysis (theoretical functionality 2, number average molecular weight 2000, OH number 56, polydispersity 1.058, degree of unsaturation 5 mmol/kg) were added to the reaction mixture. After the addition, the reaction mixture was stirred until a NCO content of 3.7 wt.-% was obtained. After this, 149.6 g of a OH functional

hydrocarbon resin (about 4 wt.-% OH; Novares LX 200) were added at 65 °C (2 hours) and finally 120 mg of the catalyst N,N-dimethyldodecane amine were added. The reaction mixture was heated at 65 °C until a NCO content of < 0.1 wt.-% was obtained. Finally, 120 mg of benzoylchloride were added to the product.

After cooling the blocked polyurethane prepolymer to ambient temperature, the color no. was 80 (Hazen (APHA)).

Experiment 2 – Comparative example using a polyether produced by base catalysis

51.9 g of 2,4-toluene diisocyanate and 10 mg of 2-chlorpropionic acid were mixed and heated to 80 °C. Within 3 hours, 298.3 g of a polypropylene glycol produced by base catalysis (theoretical functionality 2, number average molecular weight 2000, OH number 56, polydispersity 1.04, degree of unsaturation 25 mmol/kg) were added to the reaction mixture. After the addition, the reaction mixture was stirred until a NCO content of 3.5 wt.-% was obtained. After this, 149.6 g of a OH functional hydrocarbon resin (about 4 wt.-% OH; Novares LX 200) were added at 65 °C (2 hours) and finally 120 mg of the catalyst N,N-dimethyldodecane amine were added. The reaction mixture was heated at 65 °C until a NCO content of < 0.1 wt.-% was obtained. Finally, 120 mg of benzoylchloride were added to the product.

After cooling the blocked polyurethane prepolymer to ambient temperature, the color no. was 125 (Hazen (APHA)), thus being about 50 % higher than that of the DMC based polyether as described above.

4. As can be seen by the above test results, the use of the polyether polyols made by the DMC catalysis method provided a significant improvement in the color properties of the blocked polyurethane prepolymers, as compared with the prepolymers shown in Schmalsteig. This result was unexpected, and could not have been predicted based on the teachings of Schmalsteig, alone or in combination with the Acclaim product brochure. It is my well considered opinion that the presently claimed invention is not obvious in view of the cited references.

The undersigned Declarant declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or

imprisonment, or both, under Section 1001 of Title 18 of the United States code and that such willful false statements may jeopardize the validity of pending Application Serial Number 10/705,503 or any patent issuing thereon.

Signed this 11th day of February, 2005.

Dr. Jörg Tillack

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